CLP5050I-001

High Contrast License Plate Capture Camera

OPERATION MANUAL

Thank you for choosing our high quality camera.
Before attempting to connect operate this unit, please read and follow these instructions.

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CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Use Class 2 Power Supply Only

1. Cautions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note -

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

WARNING -

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Caution -

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ CAUTION

1. A regulated DC12V 3A power supply is recommended for use with this camera for the best picture and the most stable operation.
   An unregulated power supply can cause damage to the camera.
   When unregulated power supply is applied, product warranty will be out of subject.
2. It is recommended that the camera is used with a monitor that has a CCTV quality 75 video impedance level.
   If your monitor is switched to high impedance then please adjust accordingly.
3. Do not attempt to disassemble the camera to gain access to the internal componets. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial sticker for the warranty service.**

1. Cautions

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicate that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER.SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance

2. Important Safety Instruction

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

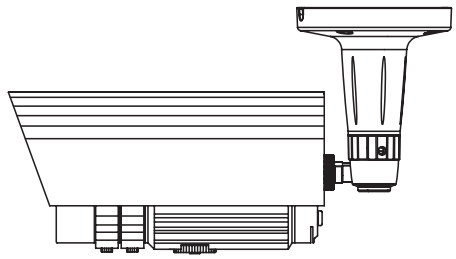
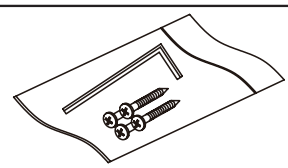
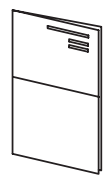
13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

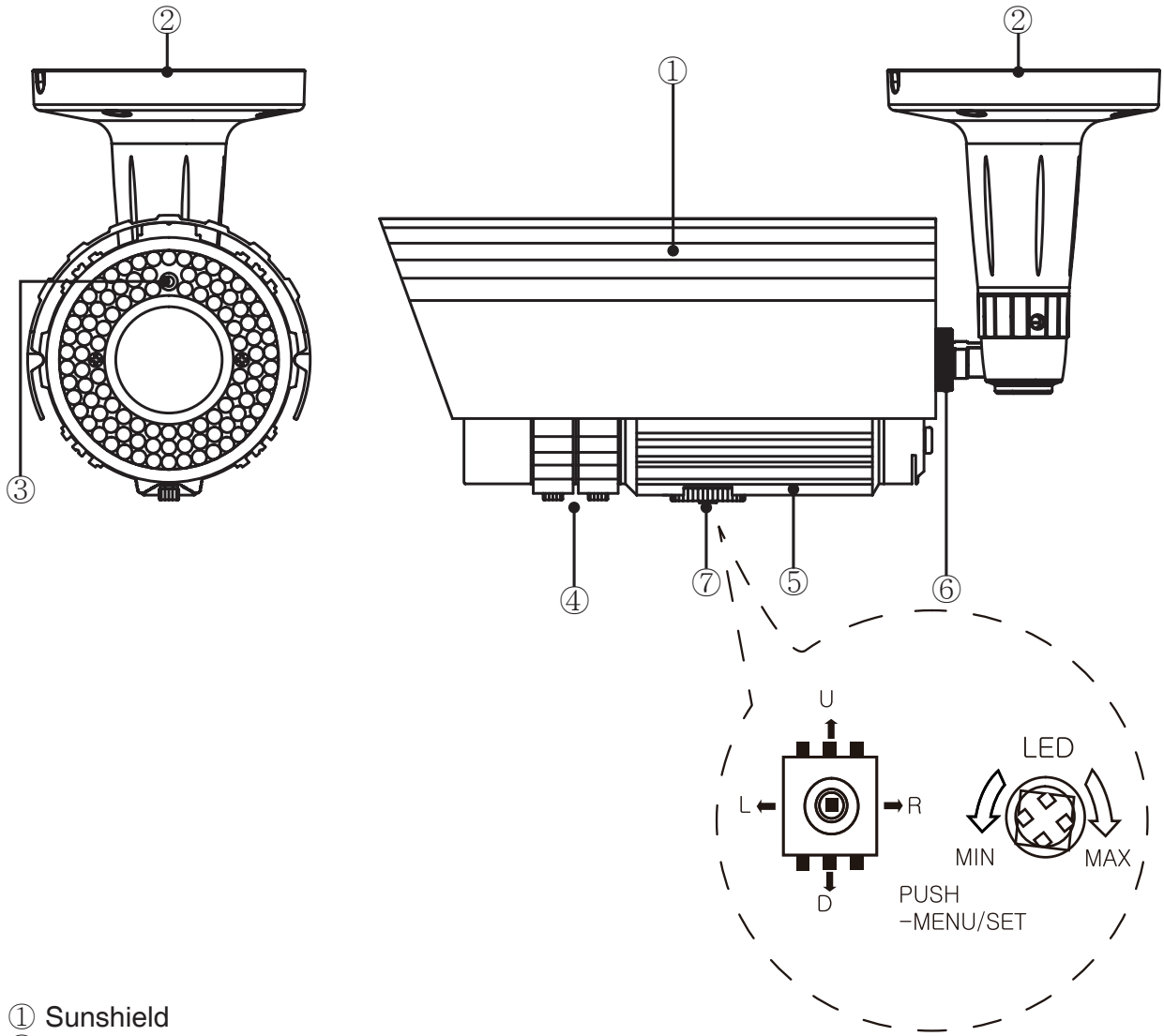
3. Features

- 1/3" Sony Super-HAD CCD Ⅱ
- High Resolution 600TV Lines
- Special filter and IR LED provides maximum readability despite headlight glare
- Plate capture up to 75mph (120Km/H)
- 5.0 ~ 50.0mm Vari-focal lens captures license plate from 16ft ~ 90ft (5M ~ 28M)
- 5 years IR LED lifespan
- IP65 rated weather proof
- Cable through concealed bracket
- DC12V / AC24V Dual power with auto-polarity

4. Components

CAMERA	
VIDEO OUTPUT TEST CABLE	
L-WRENCH / SCREW	
OPERATION MANUAL	

5. Name and Function

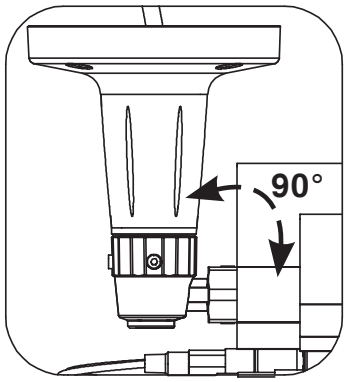


① Sunshield
② Mounting Bracket
③ Photo cell
④ External Zoom and Focus adjustment
⑤ Body
⑥ Body Fixing Ring
⑦ Function Explanation

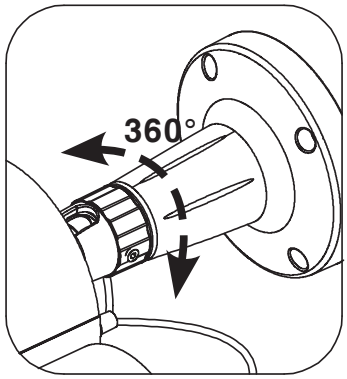
Pressing the “SETUP” button prompts the main setup menu.
“PUSH” button : To access the main setup menu
“U” button : Menu item UP selection
“D” button : Menu item DOWN selection
“L” button : To change data to down
“R” button : To change data to up
LED Level : LED Volume – Adjusting brightness of the LED
(Initial Setting Level :Max , Camera part Only)

6. Installation

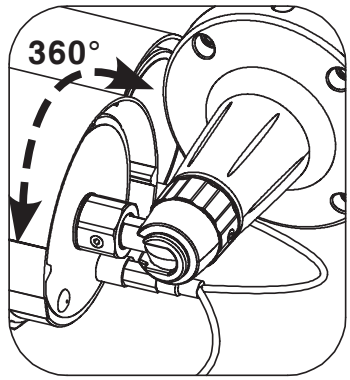
• MOUNTING POSITION



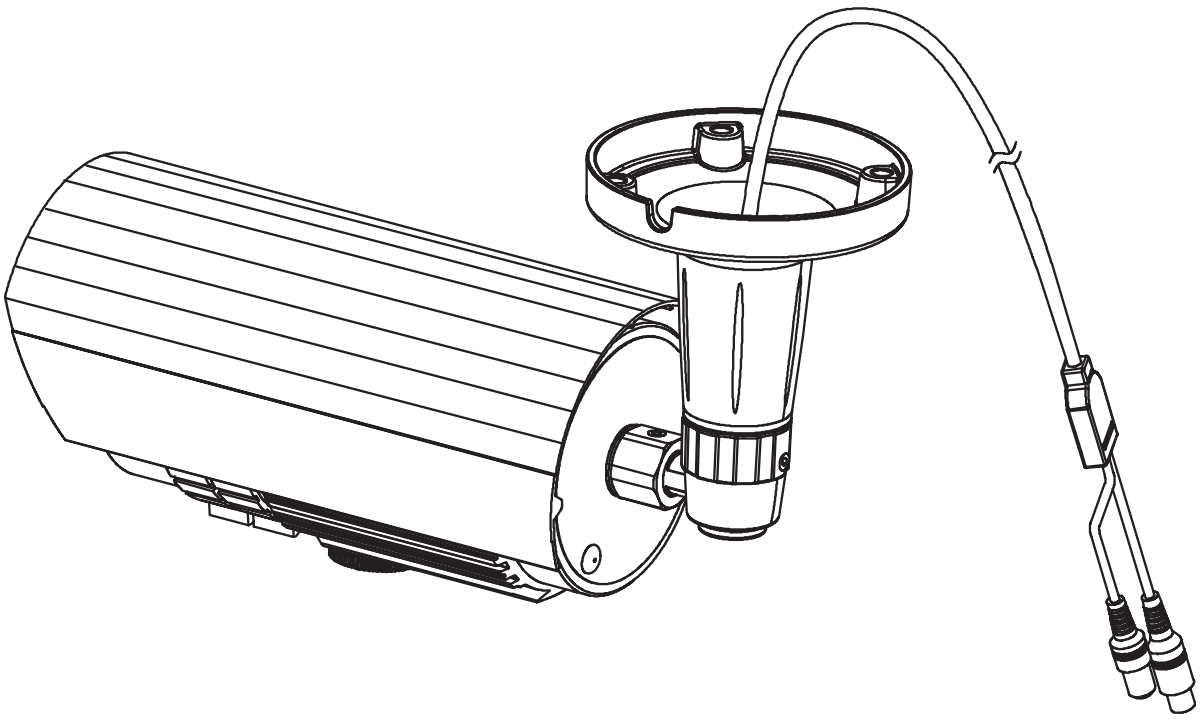
* 1st Axis



* 2nd Axis



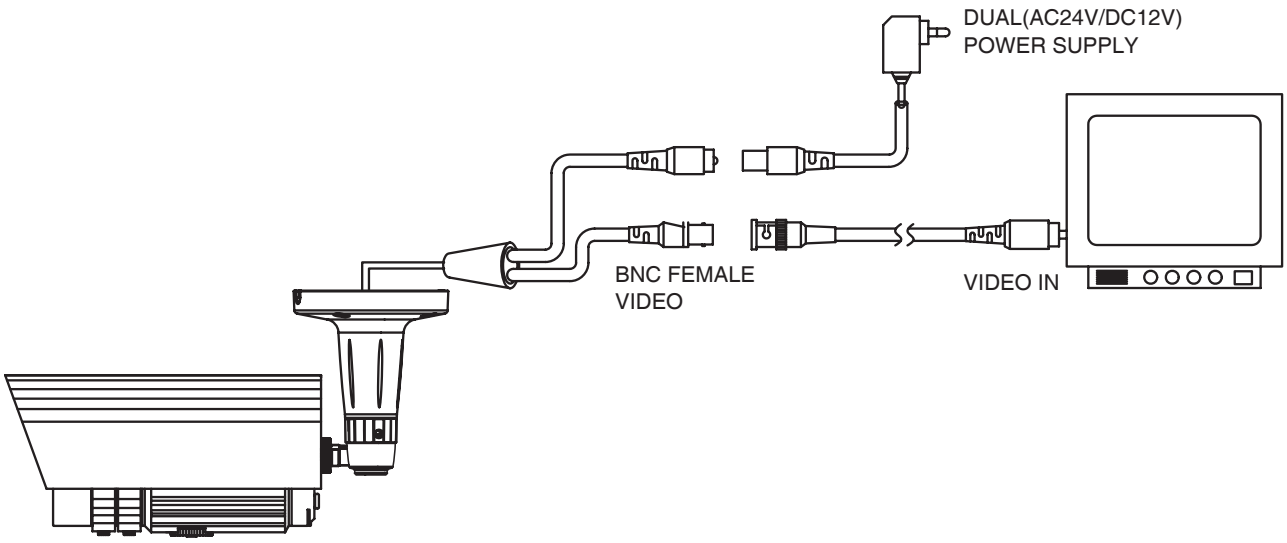
* 3rd Axis



6. Installation

• MONITOR CONNECTION

DUAL(DC12V/AC24V)



When you install the camera, please glue up the end of cable to keep it stable in order to protect the camera from the humidity problems.

7. Functions

OSD Menu Structure

- **MODE**
  - INSTALLATION
    Installation Mode provides bright video screen to adjust angle and focus.

  - LICENSE-PLATE
    License-plate Mode provides high contrast and clear license plate image for license plate capture.

SETUP

▶ MODE LICENSE-PLATE
SHUTTER 1/3000
NEG. IMAGE OFF
EXIT

- **SHUTTER**
  1/1,000 ~ 1/10,000 (adjusted to 1/500sec measure).
  - Adjusted when LICENSE-PLATE MODE is performed (Initial value: 1/3,000)
  - Indicated "---" when INSTALLATION MODE is set.

SETUP

MODE LICENSE-PLATE
▶ SHUTTER 1/3000
NEG. IMAGE OFF
EXIT

- **NEGATIVE**
  User can select positive or negative image.

Negative OFF

Negative ON

SETUP

MODE LICENSE-PLATE
SHUTTER 1/3000
▶ NEG. IMAGE OFF
EXIT

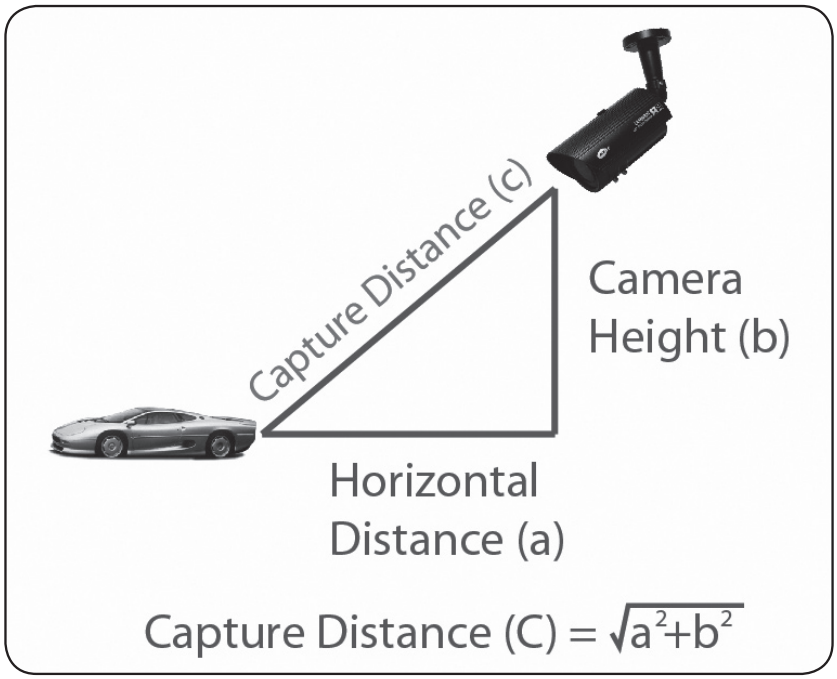
8. Target Markets

- **Government**
- **Military**
- **Hotels and Casinos**
- **Parking Lots**
- **Border Patrol**
- **Gated Communities**
- **Traffic monitoring**
- **Embassies**
- **Ports**
- **College Campus**
- **Airports**
- **Law Enforcement**
- **Toll Booths**
- **Security**

9. Installation Guideline

Camera Height

- Must consider height in distance calculation.
- Sharper angle will alter appearance of plate.

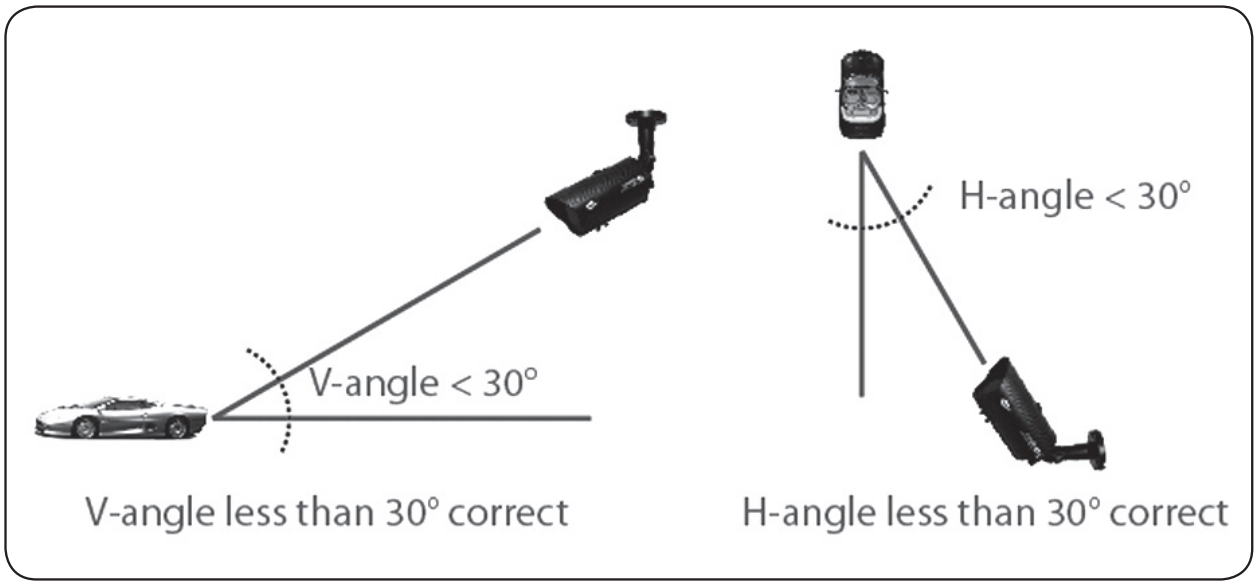


Camera Height (Ft)	Horizontal Distance (Ft)	Capture Distance(Ft)
10	10	14.14
11	20	22.83
12	30	32.31
13	40	42.06
14	50	51.92

9. Installation Guideline

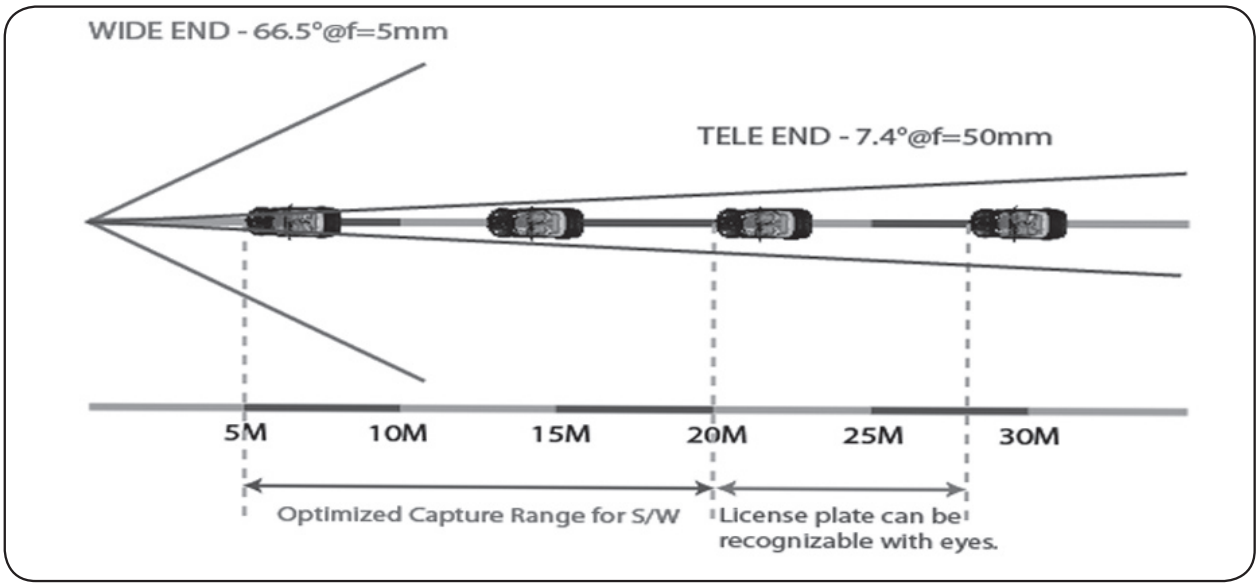
Camera Angles

- Vertical and horizontal angle must not exceed 40 degrees to get optimal view of the license plate.



Capture Zone

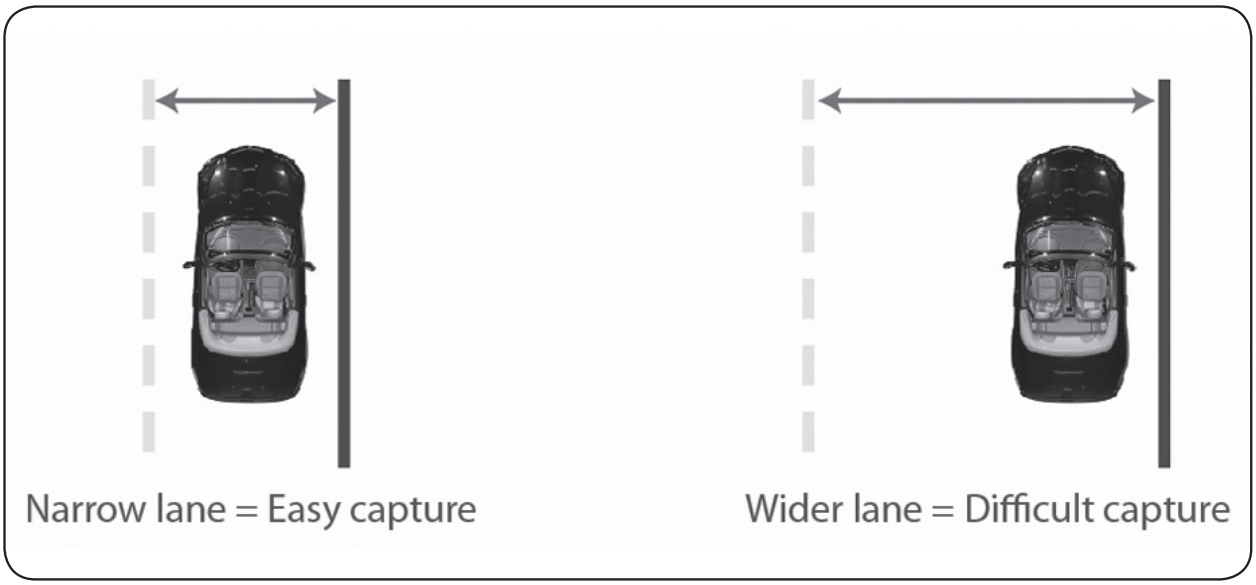
- Wider angle provide shorter capture distance.
- Tele angle provide longer capture distance.



9. Installation Guideline

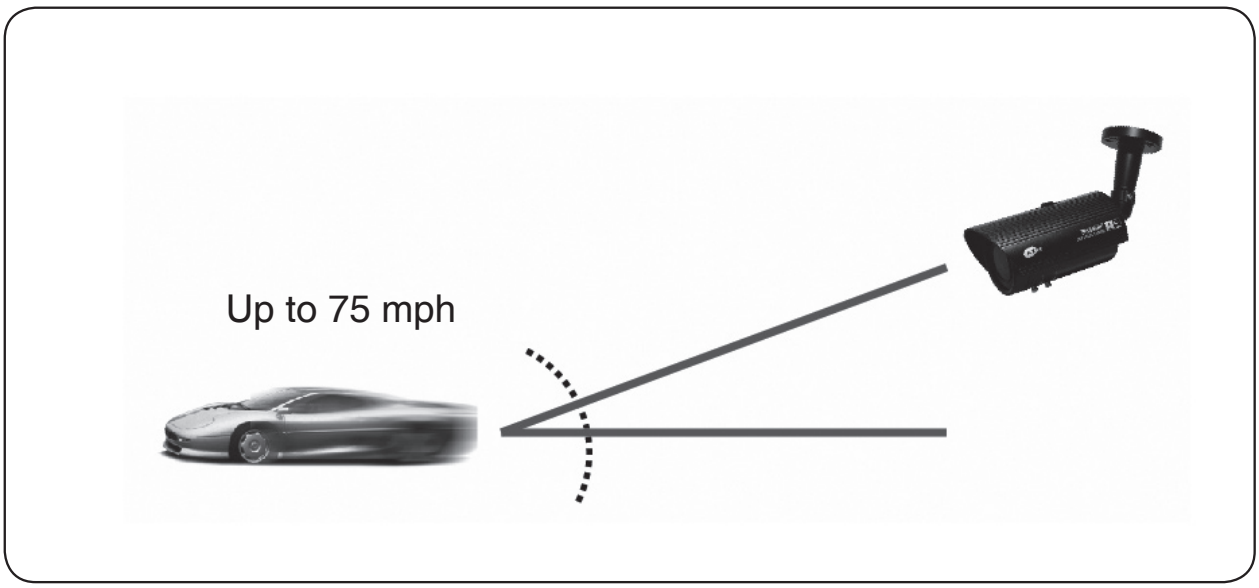
Lane Width

- Narrow lanes = less variation in plate location.
- Wider lanes = more variation in plate location.
- Lens should cover entire width of the lane.
- Ensure horizontal field of view is wide enough.



Speed

- Camera can capture moving vehicles up to 75mph.
- Keep camera as low as possible.
- Minimize horizontal angle.
- Zoom in the lens as close as possible.



9. Installation Guideline

DVR

- Camera is fully compatible with industry standard DVRs.
- Check compression settings.
- Non-conditional refresh compression. (i.e. MJPEG or JPEG)
- D1 (720x480) resolution.
- 30fps (each channel) for best results.

10. Specification

Signal Format		NTSC	PAL
Image Device		1/3" Sony Super HAD CCD Ⅱ	
Total Pixels		811(H) x 508(V)	795(H) x 596(V)
Effective Pixels		768(H) x 494(V)	752(H) x 582(V)
Inter. H/V		15.734KHz(H), 59.94Hz(V)	15.625KHz(H), 50Hz(V)
H.Resolution		600TV Lines	
Minimum illumination		0 Lux (IR LED ON)	
S/N Ratio		More than 50dB (AGC Off)	
Sync System		Internal	
Video Output		1.0 Vp-p Composite(75Ω)	
Image Display		BW	
Lens		5-50mm DC Drive Vari-focal lens(ICR)	
IR LED		850nm, 100ea	
Operating Temperature		-22˚F~122˚F(-30˚C ~ +50˚C)	
Storage Temperature		-4˚F~140˚F(-20˚C ~ +60˚C)	
Power Consumption	DUAL	DC12V ±10% Max 1.5A	
		AC24V ±10% Max 28W	
Weight		Approx. 1.8kg	
Switch function		Joystick , LED Brightness Control volume	
Dinmension(mm)		114.2 x 173.8 x 315	
IP Rating		IP65 (Weather Proof)	

Specifications and designs are subject to change for improving the functionality of this product without notice.

11. Dimensions